

What is a Rain Garden?



- 💧 A shallow, planted depression that catches runoff from downspouts, driveways, yards, parking lots, streets and other areas, allowing it to soak into the ground.
- 💧 A purposeful landscape feature that functions year-round.

Why use rain gardens?

- Help restore natural watershed hydrology and reduce pollution.
- Create attractive landscape.
- Build desirable wildlife habitat.



Residential Yards



Photo courtesy: County of Albemarle, Virginia

Residential Yards



Photo courtesy: Friends of Sligo Creek

Residential Streets



Weller Avenue, Springfield



Churches, Schools, Commercial Sites



Community Foundation of the Ozarks, Springfield

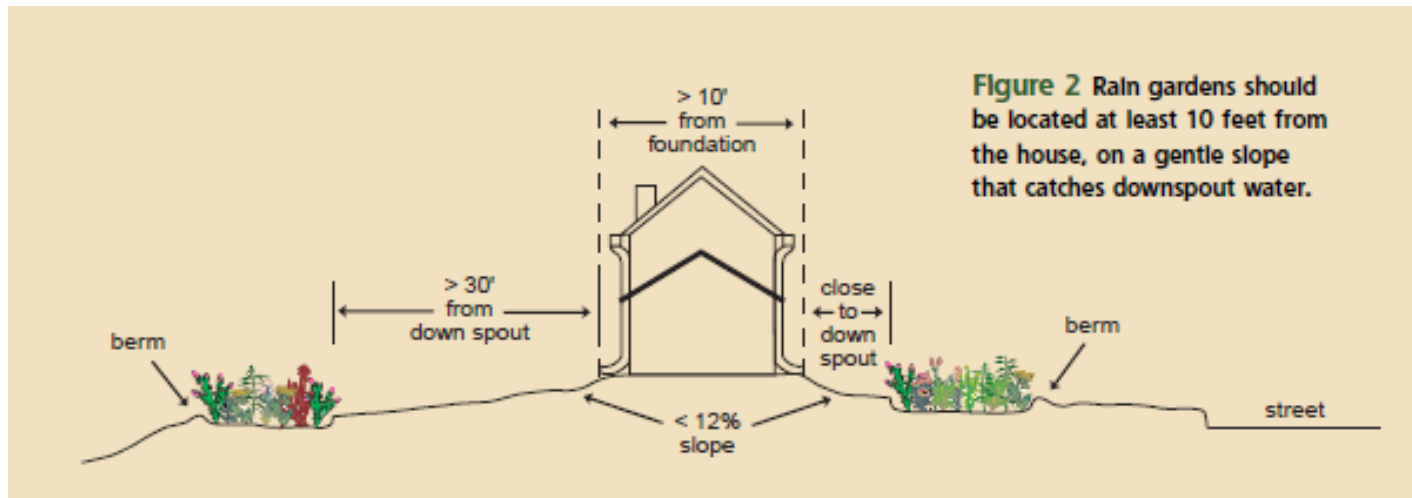
Let's get started

- 💧 Determine runoff sources.
- 💧 Select your best site.
- 💧 Calculate required area and number of plants.
- 💧 Test your soil.
- 💧 Position, outline, dig.
- 💧 Select and install plants.
- 💧 Mulch and maintain.



Site Selection

- ❖ Choose a site that's at least 10 feet away from any foundations.
- ❖ A sunny location is best. If near a tree, stay out of “dripline” to protect roots.
- ❖ Align it with the existing drainage pattern so overflow drains away from the home or building, but not onto a neighbor!



Sizing Your Rain Garden

Size your rain garden based on area draining to it:

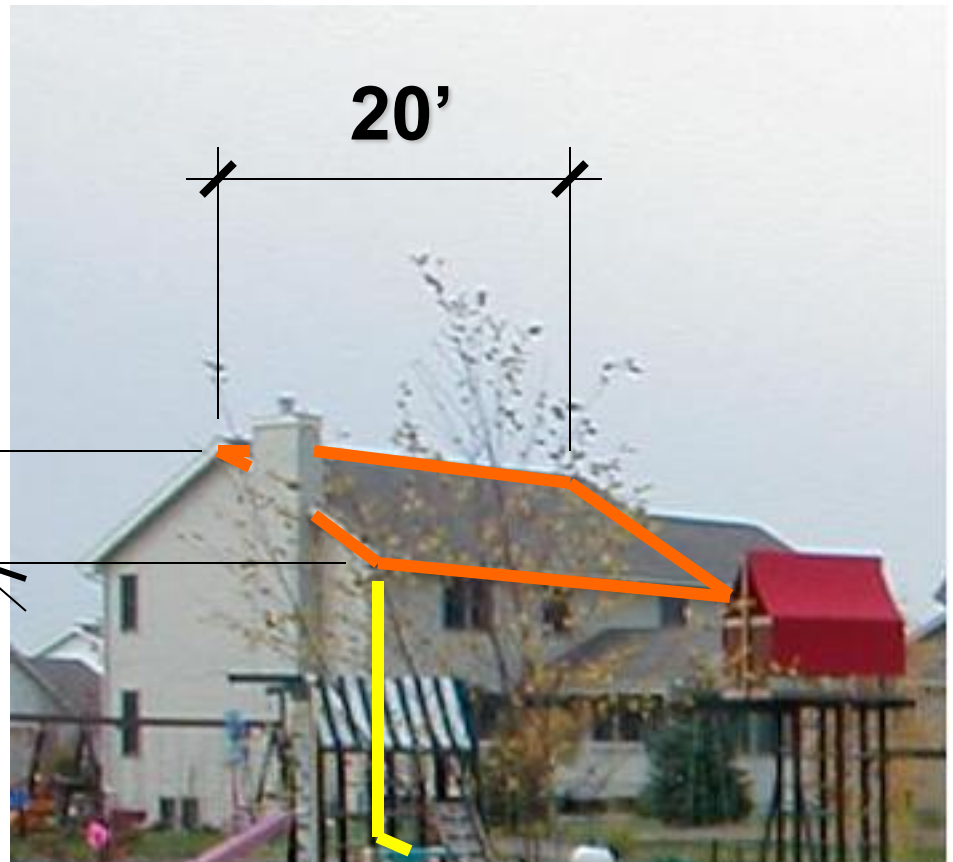
Example

20' x 10' = 200 sq ft w/
one downspout

Good Rule:

30% of area (60 sq.
ft)

10'



Percolation Test

- ◆ Design to drain within 24 hours
- ◆ Dig 12 X 12 inch hole.
- ◆ Fill with water. Let saturate for an hour. Refill hole and wait.
- ◆ Measure and calculate how much will infiltrate in 24 hours. (Ex. if only infiltrates 4 inches, then garden should be no deeper than 4 inches.)
- ◆ Over-excavate and amend if necessary



Photo By David Dods, URS

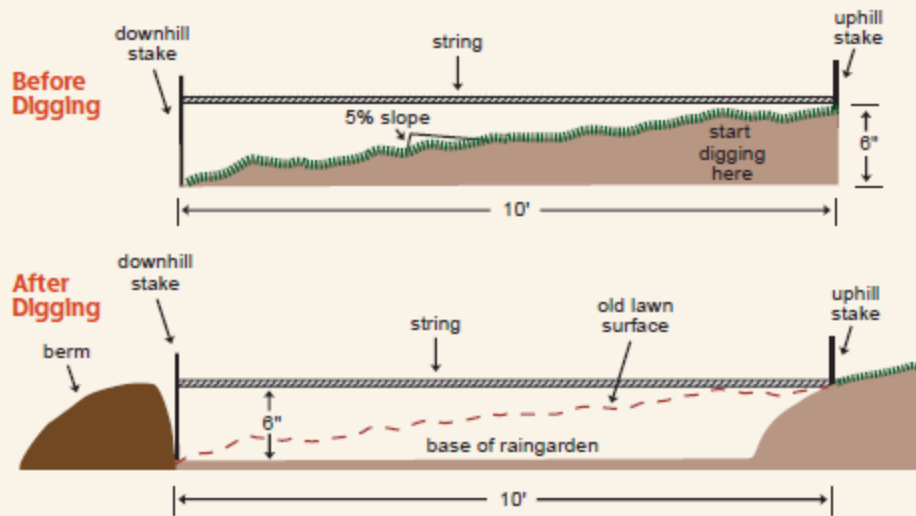
Amendment recipe:

- ✓ 50% sand +
- ✓ 25% topsoil +
- ✓ 25% organic matter

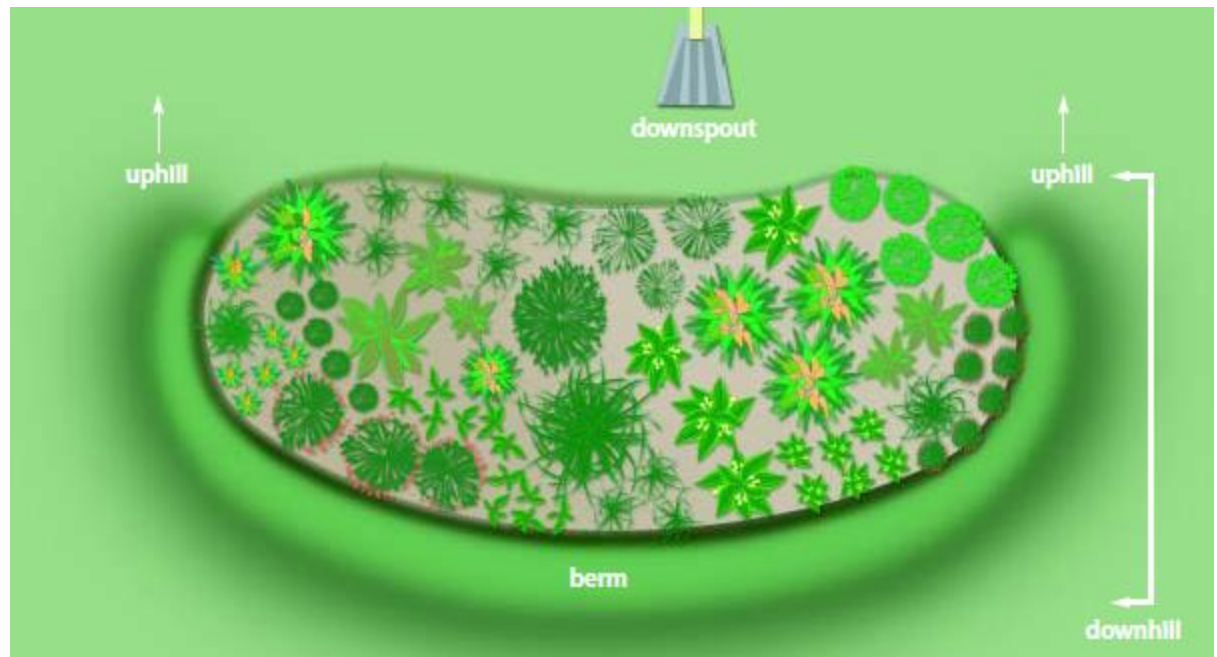
Constructing Your Rain Garden

- ◆ Call Dig-Rite (1-800-DIG-RITE) before you start excavating.
- ◆ Start by digging a shallow, flat depression with gradually sloping sides.
- ◆ A typical depth for a rain garden is 6". Can go shallower (3-4") or deeper (max 12").
- ◆ Use excavated dirt elsewhere or build a berm on the downhill side of your rain garden.
- ◆ Stabilize inflow and overflow points with rock if desired.

a. Between 3% and 8% slope lawn



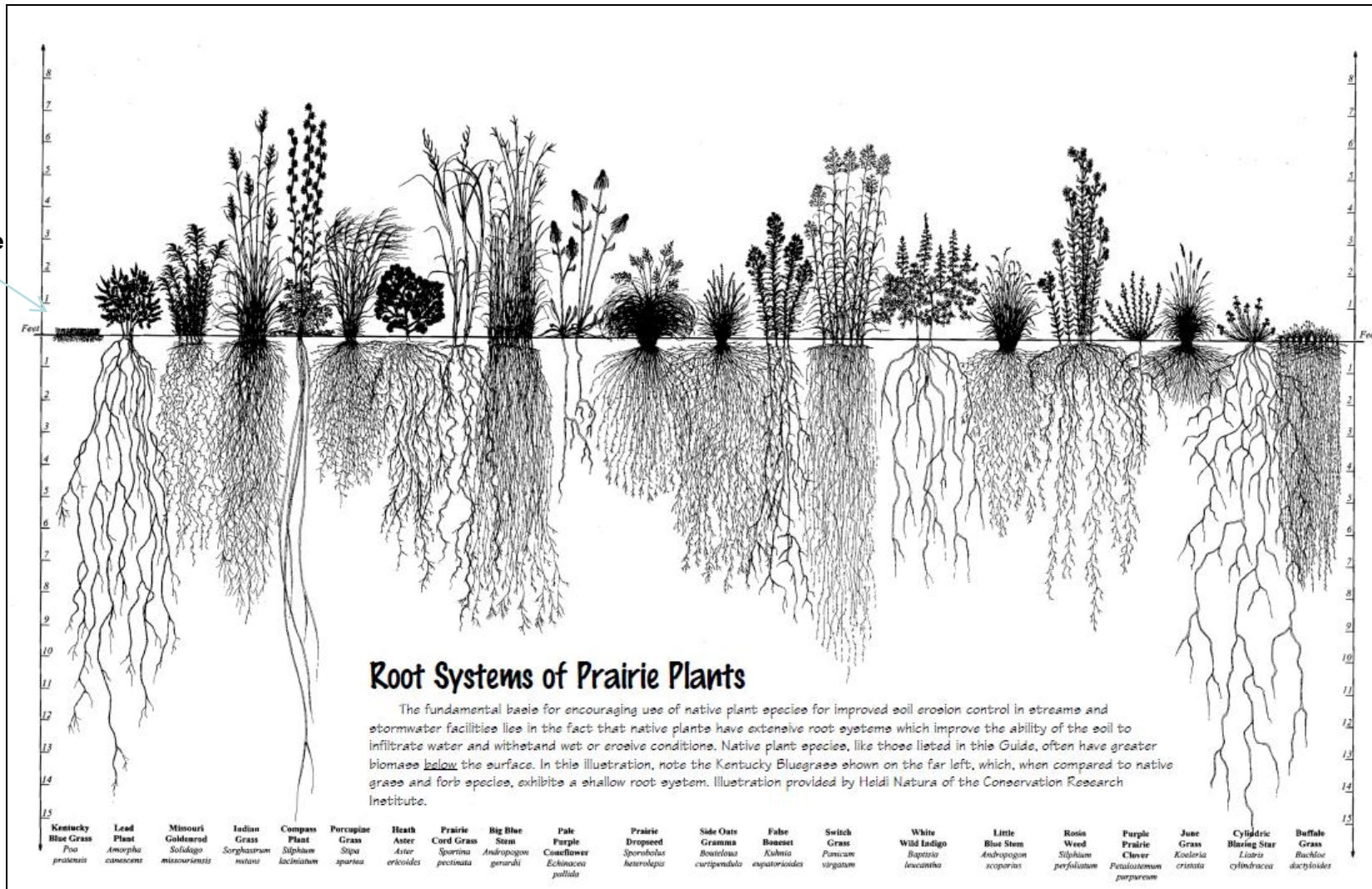
Source: Wisconsin's "Rain Gardens – A how-to manual for homeowners"



Plant Selection – Natives are Best!

- 💧 Hardy, low maintenance
- 💧 Tolerate both wet and dry periods
- 💧 Don't need fertilized
- 💧 Deep roots promote infiltration
- 💧 How many plants? If spaced 18", divide square footage of garden by 2.25. Some plants may need more or less spacing.

Kentucky Blue Grass



15'

Source: <http://www.il.nrcs.usda.gov/technical/plants/npg/NPG-rootsystems.html>

Natives Wildflowers

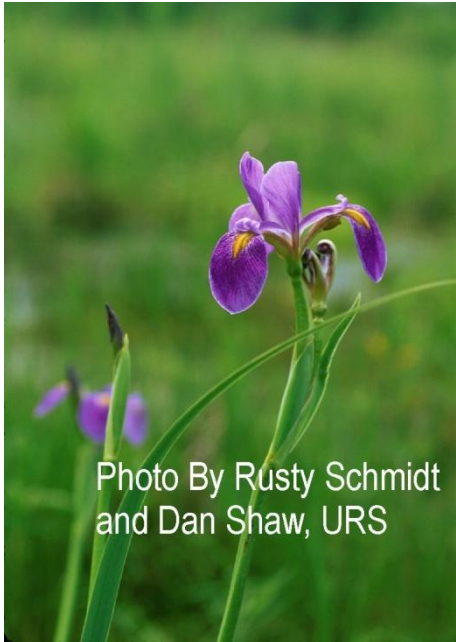


Photo By Rusty Schmidt
and Dan Shaw, URS

Blue Flag Iris



Photo By Rusty Schmidt
and Dan Shaw, URS

Butterfly Weed



Swamp
Milkweed

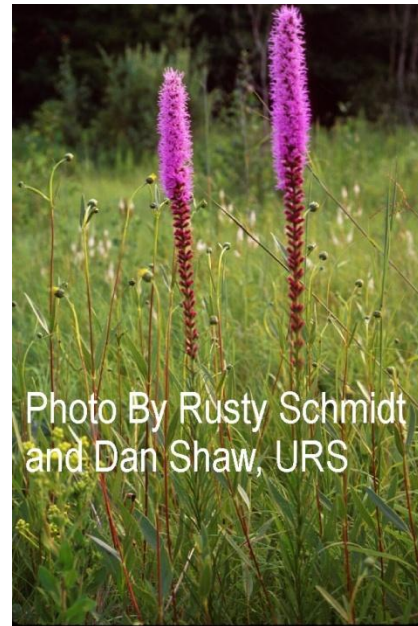


Photo By Rusty Schmidt
and Dan Shaw, URS



Cardinal Flower

Prairie Blazing Star

Native Grasses and sedges



Little Bluestem



Soft Rush



Palm Sedge



Tussock Sedge

Native Woody Species



Buttonbush



Ninebark



Virginia Sweetspire



View natives at local demo sites – Unitarian Church Rain Garden on Battlefield

Start to Finish



Photos Courtesy: Amanda Meder, City of Lincoln, NE

Rain garden maintenance

- ☘ Weed regularly for the first year.
- ☘ Remove seed heads and dead stems.
- ☘ Replace mulch as needed.
- ☘ Enrich with supplemental plantings of other appropriate native plant species as needed.



Source: 10,000 rain gardens

What about mosquitoes?



- ◆ Need at least a week of standing water to complete life cycle from egg to adult.
- ◆ Rain garden designed to drain in 24 hours.

Resources

- City of Springfield Storm Water Services
www.springfieldmo.gov/stormwater
 - Local demonstration projects and photos
 - Links to technical resources and native plant information

Every drop counts! Managing storm water on-site with rain gardens and other practices can go a long way in protecting our water resources.



Rainwater Harvesting

People have been collecting and using rainwater for thousands of years.

Somewhere along the way we forgot why and became dependant on city or well water.



Photo Courtesy: www.rainbarrelguide.com

What's a Rain Barrel?



- Any container used to collect rainwater. Can be large or small.
- Also known as a cistern.
- Stores water to be used at a later date.



Why use a rain barrel?

- Reduce the demand on public and private water supplies.
- Reduce storm water runoff.
- Save money.
- Plants like it.

1" rainfall on 1,000
sq. ft. roof = 600 gallons



Photo Courtesy: www.grapevinetexas.gov

The stored water can be used for non-potable uses...



A large, vibrant illustration of a butterfly with yellow and black wings perched on a cluster of tulips in shades of orange, red, and yellow. The scene is set against a solid blue background. This artwork is printed on a blue cylindrical container, likely a canister or jar.



You can build your own



Instructions available at www.jamesriverbasin.com

Local Rain Barrel Rebate

- \$25 instant rebate per barrel for Greene County residents.
- Limit 4 per address.
- Funded by City of Springfield Public Works, Greene County Resource Management, City Utilities.



Local Rain Barrel Rebate



Pre-made barrel: Wickman's Garden Village 1345 S. Fort

Program Price: \$100

Instant Rebate -\$25 (Greene County residents only)

Rebated Price \$75



2-barrel Diverter Kit: Habitat ReStore 2410 S. Scenic

Program Price: \$140

Instant Rebate -\$25x2 (Greene County residents only)

Rebated Price: \$90

For more information on the rain barrels
available locally, visit
www.jamesriverbasin.com.

Save It FROM
a Rainy Day



Help Us Fill
1,000 Barrels

